

Applicant Name Buffalo Rapids District 1
Project Name Open Lateral 34.5 Conversion to Pipeline

Project Abstract

The proposal area covers 34,169 acres of the 45,647 contained within the Buffalo Rapids Project located on 64 miles of the Yellowstone River in eastern Montana.

Buffalo Rapids has two primary concerns: water quantity and water quality. Secondary concerns are soil erosion, noxious weeds, and CO₂ emissions. Current conditions are a 30% overall irrigation water use efficiency; nitrate fraction in excess of 7% in the Lower Yellowstone River near Glendive is being attributed to Buffalo Rapids; estimated 10 tons of soil loss per acre from furrow erosion; and 2,100 acres of noxious weed infestation.

Goals and objectives:

- Increase system efficiency by 20%;
- Reduce nitrate loading by 50%;
- Reduce soil erosion to sustainable levels;
- Reduce noxious weed infestations by 75%; and
- Reduce CO₂ emissions by 5,000 tons per year.

The goals and objectives will be achieved by the most efficient and cost-effective method of addressing the problem developed through the Natural Resources Conservation Service (NRCS) Resource Management System (RMS) planning for groups involved with laterals and on farm planning. Construction is being done by Buffalo Rapids, which has the means and experience, with technical assistance from NRCS and the U.S. Bureau of Reclamation (USBR). Since the first contracts were funded in October 1998, installations include 210,000 feet of pipe, two weather stations to improve irrigation water management and education, a mile of canal liner, 14 center pivots, 47 surge valves, and over 166,934 feet of gated pipe.

This project involves the replacement of one open lateral with PVC pipe. The total cost will be \$209,757 with Buffalo Rapids District 1 donating \$60,825 in materials, labor, and machine time; NRCS contributing \$28,612 in planning, follow-up, and Environmental Quality Incentive Program (EQIP) funds; landowners contributing \$20,320; and the Renewable Resources Grant and Loan Program (RRGL) \$100,000.